

U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Well Name: HUERFANO UNIT	Well Location: T25N / R10W / SEC 13 / NESW / 36.398056 / -107.85141	County or Parish/State: SAN JUAN / NM
Well Number: 221	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMSF079787	Unit or CA Name: HUERFANO UNIT--DK	Unit or CA Number: NMNM78395C
US Well Number: 3004520862	Well Status: Producing Gas Well	Operator: HILCORP ENERGY COMPANY

Notice of Intent

Sundry ID: 2709321

Type of Submission: Notice of Intent

Type of Action: Plug and Abandonment

Date Sundry Submitted: 01/04/2023

Time Sundry Submitted: 05:40

Date proposed operation will begin: 01/18/2023

Procedure Description: Hilcorp Energy Company requests permission to P&A the subject well per the attached procedures, current and proposed wellbore schematics. A closed loop system will be used. A pre-disturbance site visit was not conducted as surface is Fee.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Huerfano_221_P_A_Procedure_for_NOI_20230104053918.pdf

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COMPANY

Conditions of Approval

Additional

25N10W13KKd_Huerfano_Unit_221_20230106091859.pdf

Authorized

General_Requirement_PxA_20230106130958.pdf

2709321_NOIA_221_3004520862_KR_01062023_20230106130947.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: KANDIS ROLAND

Signed on: JAN 04, 2023 05:40 AM

Name: HILCORP ENERGY COMPANY

Title: Operation Regulatory Tech

Street Address: 382 Road 3100

City: Farmington State: NM

Phone: (505) 599-3400

Email address: kroland@hilcorp.com

Field

Representative Name:

Street Address:

City: State: Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 01/06/2023

Signature: Kenneth Rennick

Hilcorp Energy Company

Proposed P&A Procedure

Well: Huerfano Unit #221

API: 30-045-20862

Date: 12/19/2022

Engr: M Wissing

Surface: Fee

Wellbore		Wt #	ID	Bottom (ft)	Bbl/ft	Drill Bit
SPUD	3/29/1972					
KB (ft)	11					
Surface Casing	8-5/8"	24	8.1	209	0.06370	12-1/4"
Production Casing	4-1/2'	10.5	4.05	6721	0.01593	7-7/8"
Csg x Open hole	7.875 X 4.5	-	-	-	0.04060	
Csg Annular	8.1 X 4.5	-	-	-	0.04410	
Tubing	2-3/8" (11/22)	209 jts		6,547'		
PBTD	6,683 ft					

Cement

Type	Class G	
Yield	1.15	Bbl/sx
Water	5	Gal/sx
Weight	15.8	PPG
Total Job Cmt	302	SX
Total Cmt Water	1510	Gal
Csg Vol Water	102.9	Bbl

Lift Type: Plunger

Historic Braden Head Pressure: 0 psi

Rig History: Tbg repair 11/2022. Unknown when 4-1/2" CIBP was drilled out at 6,683' (was set due to csg leak found below float collar while drilling in 1972)

Slickline: none since last rig work 11/22

Logs: temp survey only

P&A Cement: All cement plugs include 50 ft excess volumes. Due to SJ Basin cement resource limitations, either Type III (6.64 gal/sx, 1.37 yld, 14.8#) or Type 2/5 (6.041 gal/sx, 1.27 yld, 15#) cement might be used at any point during the P&A project.

Hilcorp Energy Company

Proposed P&A Procedure

RIG P&A PROCEDURE:

- 1) Verify all wellhead valves are operatable.
- 2) Verify slickline has cleared 2-3/8" tbg with gauge ring down to 6,547'.
- 3) Move onto well location. Check well pressures on all casing strings and record (daily). Check well for H₂S and blow down well as necessary.
- 4) RD wellhead and RU BOPs. Function test BOP 2-3/8" pipe and blind rams.
- 5) MU 2-3/8" work string with 4-1/2" csg scraper and RIH to 6,475'. POOH.
- 6) MU 4-1/2" CICR (3.875" ID) and RIH. Set CICR at 6,464'.
- 7) Sting out of CICR and roll the hole clean and release any trapped gas.
- 8) TOOH and LD setting tool
- 9) RU E-line and run CBL tool from CICR to surface.
- 10) Review CBL with NMOCD and adjust all cement plugs based on log results.
- 11) RIH with work string to CICR.
- 12) Pressure test the casing to 550-600 psi for 10 minutes (no chart).
- 13) String back into CICR.
- 14) PLUG #1 (TOP PERF @ 6,514', DK TOP @ 6,550')
 - a. Pump a 150' cement balanced plug from 6,314- 6,464' with 12 SXS, 2.5 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg.
- 15) TOOH to 5,860'.
- 16) PLUG #2 (GALLUP TOP @ 5,810')
 - a. Pump a 150' cement balanced plug from 5,710'- 5,860' with 12 SXS, 2.5 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg.
- 17) TOOH to 4,738'.
- 18) PLUG #3 (MANCOS TOP @ 4,688')
 - a. Pump a 150' cement balanced plug from 4,588'- 4,738' with 12 SXS, 2.5 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg.
- 19) TOOH to 3,608'.
- 20) PLUG #4 (MESA VERDE TOP @ 3,558')
 - a. Pump a 150' cement balanced plug from 3,458'- 3,608' with 12 SXS, 2.5 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg.
- 21) TOOH with tbg.
- 22) RU E-line and perf csg at 2,885'. Attempt injection rate into perms.
- 23) RIH with 4-1/2" CICR and set at 2,835'.
- 24) PLUG #5 (CHACRA TOP @ 2,835')
 - a. Pump a 150' cement inside/outside plug from 2,735' – 2,885' with 52 SXS, 10.7 BBLS of Class G, 1.15 yld, 15.8# cement for the 4-1/2" csg.
 - b. Sqz 40 sx and balance 12 sx.
- 25) TOOH to 2,058'
- 26) PLUG #6 (PC TOP @ 2,008')
 - a. Pump a 150' cement balanced plug from 1,908'- 2,058' with 12 SXS, 2.5 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg.
- 27) TOOH to 1,620'

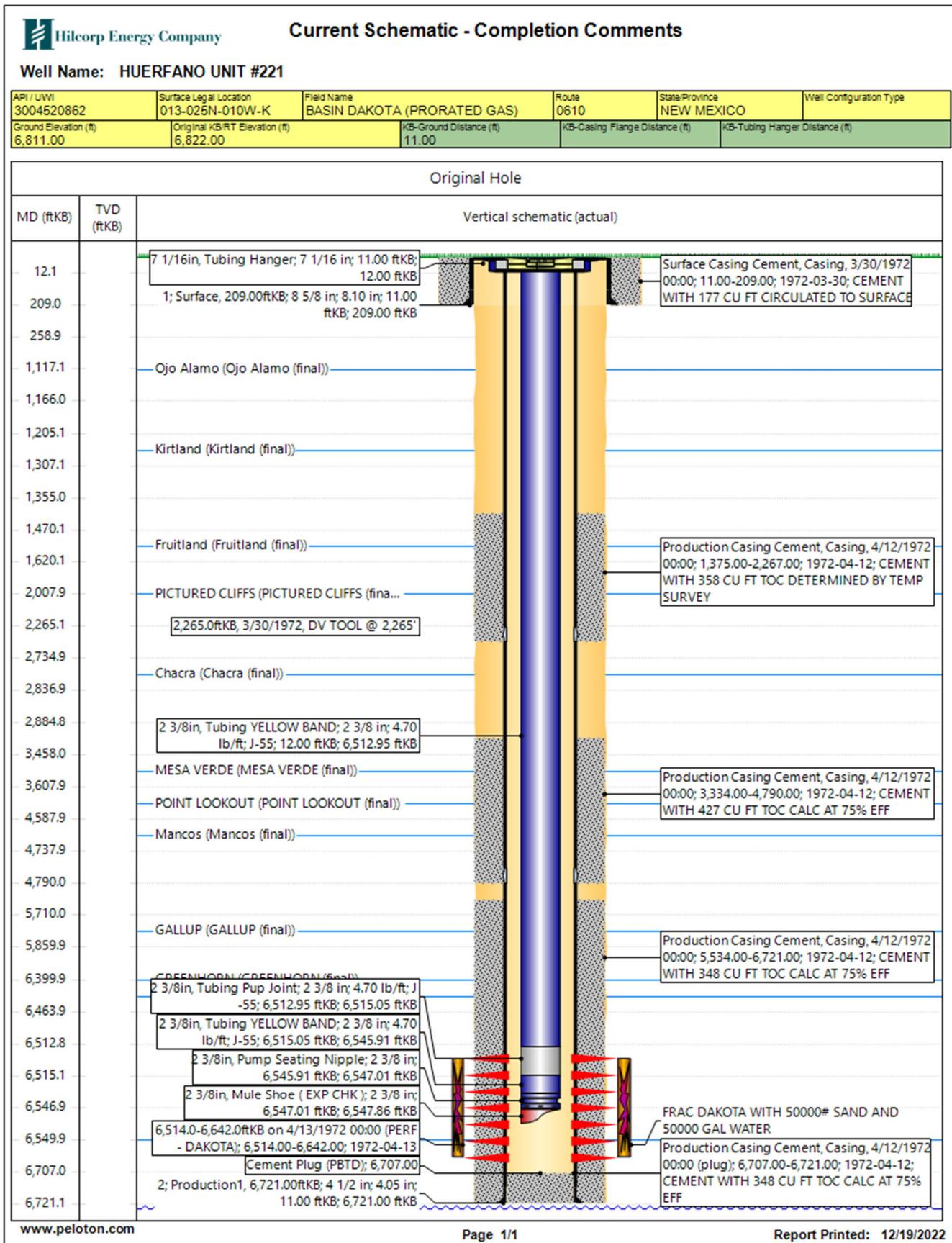
Hilcorp Energy Company

Proposed P&A Procedure

- 28) PLUG #7 (FRC TOP @ 1,570')
 - a. Pump a 150' cement balanced plug from 1,470'- 1,620' with 12 SXS, 2.5 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg.
- 29) TOOH with tbg.
- 30) RU E-line and perf csg at 1,355'. Attempt injection rate into perfs.
- 31) RIH with 4-1/2" CICR and set at 1,305'.
- 32) PLUG #8 (KIRTLAND TOP @ 1,305')
 - a. Pump a 150' cement inside/outside plug from 1,205'- 1,355' with 52 SXS, 10.7 BBLS of Class G, 1.15 yld, 15.8# cement for the 4-1/2" csg.
 - b. Sqz 40 sx and balance 12 sx.
- 33) TOOH with tbg.
- 34) RU E-line and perf csg at 1,167'. Attempt injection rate into perfs.
- 35) RIH with 4-1/2" CICR and set at 1,117'.
- 36) PLUG #9 (OJO TOP @ 1,117')
 - a. Pump a 150' cement inside/outside plug from 1,017'- 1,167' with 52 SXS, 10.7 BBLS of Class G, 1.15 yld, 15.8# cement for the 4-1/2" csg.
 - b. Sqz 40 sx and balance 12 sx.
- 37) TOOH with tbg.
- 38) RU E-line and perf csg at 259'. Attempt circulation rate with perfs.
- 39) PLUG #10 (CSG SHOE @ 209')
 - a. Circulate a 248' cement plug from 11'-259' with 74 SXS, 15.2 BBLS of Class G, 1.15 yld, 15.8# cement inside the 4-1/2" csg and 8-5/8" x 4-1/2" annulus.
- 40) N/D BOPE.
- 41) Cut off wellhead.
- 42) Check marker joint for correct well information and weld on P&A well marker.
- 43) Top off all casing strings and whd cellar with 12+/- sx of cement.
- 44) Release rig.

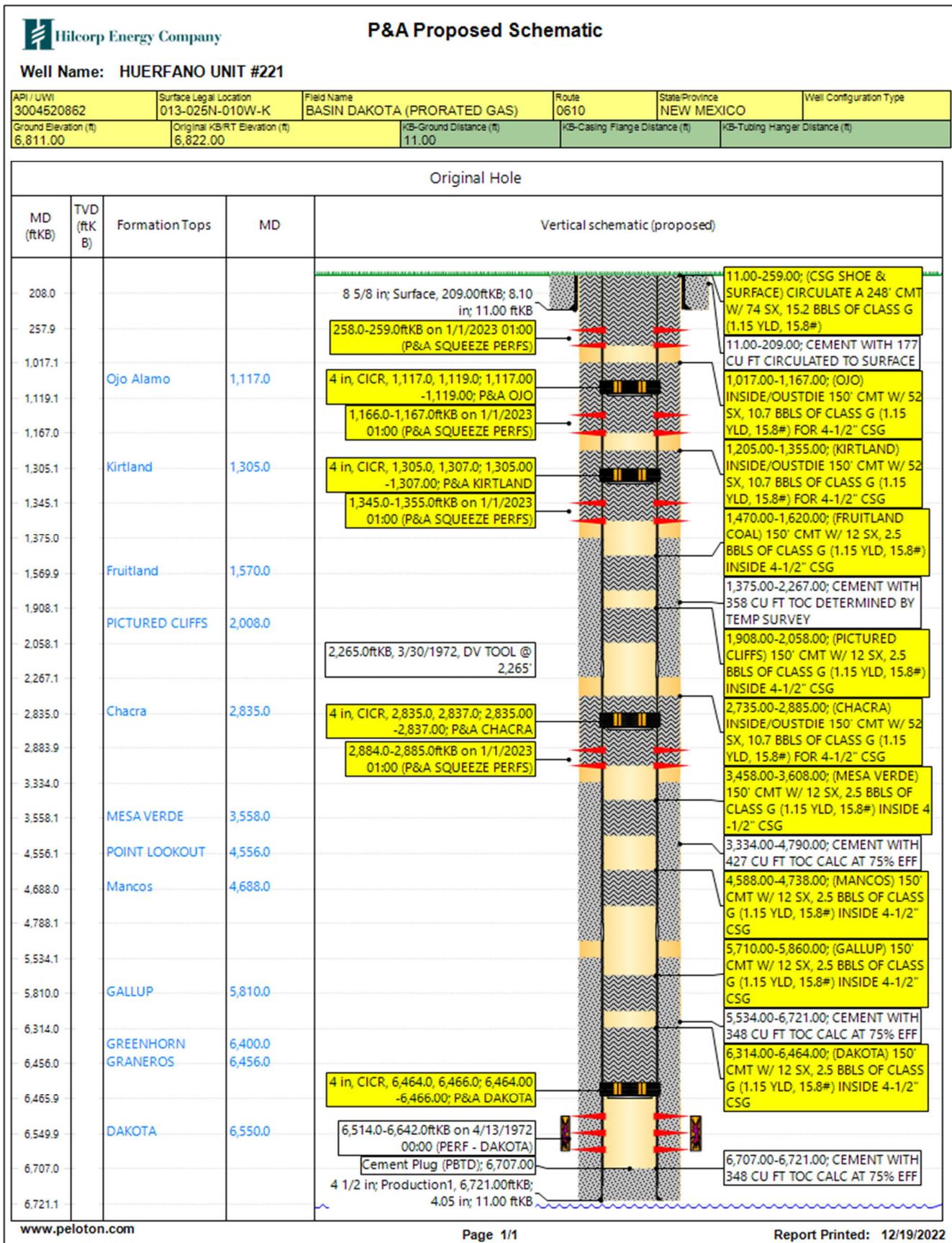
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Proposed P&A Procedure



Hilcorp Energy Company

Proposed P&A Procedure



**BLM FLUID MINERALS
P&A Geologic Report**

Date Completed: 1/6/2023

Well No. Huerfano Unit #221 (API# 30-045-20862)	Location	1550	FSL	&	1510	FWL
Lease No. NMSF079787	Sec. 13	T25N			R10W	
Operator Hilcorp Energy Company	County	San Juan		State	New Mexico	
Total Depth 6721'	PBTD 6707'	Formation Dakota				
Elevation (GL)		Elevation (KB) 6822'				

Geologic Formations	Est. Top	Est. Bottom	Log Top	Log Bottom	Remarks
San Jose					
Nacimiento			Surface	1117	Surface/possible freshwater sands
Ojo Alamo Ss			1117	1305	Aquifer (possible freshwater)
Kirtland Shale			1305	1570	Possible gas
Fruitland			1570	2008	Coal/Gas/Water
Pictured Cliffs Ss			2008	2120	Probable Gas
Lewis Shale			2120	2835	
Chacra			2835	3558	Possible Gas
Cliff House Ss			3558	3648	Water/possible gas
Menefee			3648	4456	Coal/Ss/Water/possible gas
Point Lookout Ss			4456	4688	
Mancos Shale			4688	5492	Probable O&G
Gallup			5492	6400	Probable O&G
Greenhorn			6400	6456	
Graneros Shale			6456	6550	Probable O&G
Dakota Ss			6550	PBTD	O&G/water
Morrison					

Remarks:

P & A

- Adjust Plug #2 (Gallup) to cover BLM formation top pick at 5492'.

- Dakota perfs 6514' - 6642'.

Reference Well:1) **Formation Tops**

Same

Prepared by: Chris Wenman

**GENERAL REQUIREMENTS FOR
PERMANENT ABANDONMENT OF WELLS ON FEDERAL AND INDIAN LEASES
FARMINGTON FIELD OFFICE**

- 1.0 The approved plugging plans may contain variances from the following minimum general requirements.
- 1.1 Modification of the approved plugging procedure is allowed only with the prior approval of the Authorized Officer, Farmington Field Office.
 - 1.2 Requirements may be added to address specific well conditions.
- 2.0 Materials used must be accurately measured. (densometer/scales)
- 3.0 A tank or lined pit must be used for containment of any fluids from the wellbore during plugging operations and all pits are to be fenced with woven wire. These pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced.
- 3.1 Pits are not to be used for disposal of any hydrocarbons. If hydrocarbons are present in the pit, the fluids must be removed prior to filling in.
- 4.0 All cement plugs are to be placed through a work string. Cement may be bull-headed down the casing with prior approval. Cement caps on top of bridge plugs or cement retainers may be placed by dump bailer.
- 4.1 The cement shall be as specified in the approved plugging plan.
 - 4.2 All cement plugs placed inside casing shall have sufficient volume to fill a minimum of 100' of the casing, or annular void(s) between casings, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.
 - 4.3 Surface plugs may be no less than 50' in length.
 - 4.4 All cement plugs placed to fill annular void(s) between casing and the formation shall be of sufficient volume to fill a minimum of 100' of the annular space plus 100% excess, calculated using the bit size, or 100' of annular capacity, determined from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug.
 - 4.5 All cement plugs placed to fill an open hole shall be of sufficient volume to fill a minimum of 100' of hole, as calculated from a caliper log, plus an excess volume sufficient to provide for 50 linear feet of fill above the plug. In the absence of a caliper log, an excess of 100% shall be required.
 - 4.6 **A cement bond log or other accepted cement evaluation tool is required to be run if one had not been previously ran or cement did not circulate to surface during the original casing cementing job or subsequent cementing jobs.**

5.0 All cement plugs spotted across, or above, any exposed zone(s), when; the wellbore is not full of fluid or the fluid level will not remain static, and in the case of lost circulation or partial returns during cement placement, shall be tested by tagging with the work string.

- 5.1 The top of any cement plug verified by tagging must be at or above the depth specified in the approved plan, without regard to any excess.
- 5.2 Testing will not be required for any cement plug that is mechanically contained by use of a bridge plug and/or cement retainer, if casing integrity has been established.
- 5.3 Any cement plug which is the only isolating medium, for a fresh water interval or a zone containing a prospectively valuable deposit of minerals, shall be tested by tagging.
- 5.4 If perforations are required below the surface casing shoe, a 30 minute minimum wait time will be required to determine if gas and/or water flows are present. If flow is present, the well will be shut-in for a minimum of one hour and the pressure recorded. Short or long term venting may be necessary to evacuate trapped gas. **If only a water flow occurs with no associated gas, shut well in and record the pressures. Contact the Engineer as it may be necessary to change the cement weight and additives.**

6.0 Before setting any cement plugs the hole needs to be rolled. All wells are to be controlled by means of a fluid that is to be of a weight and consistency necessary to stabilize the wellbore. This fluid shall be left in place as filler between all plugs.

- 6.1 Drilling mud may be used as the wellbore fluid in open hole plugging operations.
- 6.2 The wellbore fluid used in cased holes shall be of sufficient weight to balance known pore pressures in all exposed formations.

7.0 A blowout preventer and related equipment (BOPE) shall be installed and tested prior to working in a wellbore with any exposed zone(s); (1) that are over pressured, (2) where the pressures are unknown, or (3) known to contain H₂S.

8.0 Within 30 days after plugging work is completed, file a Sundry Notice, Subsequent Report of Abandonment (Form 3160-5), five copies, with the Field Manager, Bureau of Land Management, 6251 College Blvd., Suite A, Farmington, NM 87402. The report should show the manner in which the plugging work was carried out, the extent, by depth(s), of cement plugs placed, and the size and location, by depth(s), of casing left in the well. Show date well was plugged.

9.0 All permanently abandoned wells are to be marked with a permanent monument as specified in 43 CFR 3162.6(d). Unless otherwise approved.

10.0 If this well is located in a Specially Designated Area (SDA), compliance with the appropriate seasonal closure requirements will be necessary.

All of the above are minimum requirements. Failure to comply with the above conditions of approval may result in an assessment for noncompliance and/or a Shut-in Order being issued pursuant to 43 CFR 3163.1. You are further advised that any instructions, orders or decisions issued by the Bureau of Land Management are subject to administrative review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4 and 43 CFR 4.700.

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402**

AFMSS 2 Sundry ID 2709321

Attachment to notice of Intention to Abandon

Well: Huerfano Unit 221

CONDITIONS OF APPROVAL

1. Plugging operations authorized are subject to the attached "General Requirements for Permanent Abandonment of Wells on Federal and Indian Lease."
2. The following modifications to your plugging program are to be made:
 - a. Adjust Plug #2 (Gallup) to cover BLM formation top pick at 5492'.
3. Farmington Office is to be notified at least 24 hours before the plugging operations commence at (505) 564-7750.

You are also required to place cement excesses per 4.2 and 4.4 of the attached General Requirements.

Office Hours: 7:45 a.m. to 4:30 p.m.

K. Rennick 1/6/2023

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720
District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 173852

CONDITIONS

Operator: HILCORP ENERGY COMPANY 1111 Travis Street Houston, TX 77002	OGRID: 372171
	Action Number: 173852
	Action Type: [C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
kpickford	CBL required	1/18/2023
kpickford	Notify NMOCD 24 Hours Prior to beginning operations	1/18/2023
kpickford	Adhere to BLM approved COAs and plugs. See BLM COAs and GEO report.	1/18/2023